

ABSTRACT

An apparatus and associated methods for polishing semiconductor wafers and other workpieces that includes polishing surfaces located at multiple polishing stations. Multiple wafer heads, preferably at least one greater in number than the number of polishing stations, can be loaded with individual wafers. The wafer heads are suspended from a rotatable support, which provides circumferential positioning of the heads relative to the polishing surfaces, and the wafer heads move linearly with respect to the polishing surface, thus providing relative linear motion between the wafer and the polishing station. A load/unload station may be located at a position symmetric with the polishing surfaces. The rotatable support can simultaneously position one of the heads over the load/unload station while the remaining heads are located over polishing stations for wafer polishing so that loading and unloading of wafers can be performed concurrently with wafer polishing. The multiple polishing stations can be used to sequentially polish a wafer held in a wafer head in a step of multiple steps. The steps may be equivalent, may provide polishes of different finish, or may be directed to polishing different levels. Alternately, more than one wafer may equivalently be polished at multiple polishing stations.